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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

blicant: Ca

Cantor et al.

Serial No.: Conf. No.:

10/645,816 Unassigned

Customer No.:

24961

Filed:

August 20, 2003

For:

USE OF NUCLEOTIDE ANALOGS IN

THE ANALYSIS OF OLIGONUCLEOTIDE

MIXTURES AND IN HIGHLY MULTIPLEXED NUCLEIC ACID

SEQUENCING

Art Unit:

1634

Examiner:

Unassigned

TRANSMITTAL LETTER

Commissioner for Patents

U.S. Patent and Trademark Office

P.O. Box 1450, Alexandria, VA 22313-1450

Sir:

Transmitted herewith are an Information Disclosure Statement, Forms PTO-1449 (3 pages), and cited references for filing in connection with the above-identified application. Because this Information Disclosure Statement is filed prior to receipt of a First Office Action on the merits in the above-referenced application, no fee is due. However, should it be determined that a fee for filing these papers is required, the Commissioner is authorized to charge Deposit Account No. 50-1213, as stated below:

(X)

The Commissioner is hereby authorized to charge any fees that may be due under 37 C.F.R. §§1.16-1.17 in connection with this paper or with this application during its entire pendency to Deposit Account No. 50-1213. A duplicate of this sheet is enclosed.

Respectfully submitted,

HELLER, EHRMAN, WHITE & McAULIFFE LLP

By:

Stephanie L. Seidman Registration No. 33,779

Dated: December 22, 2003

Attorney Docket No.: 25491-2408B

Address all correspondence to:
Stephanie Seidman, Esq.

HELLER, EHRMAN, WHITE & McAULIFFE LLP

4350 La Jolla Village Drive, 7th Floor

San Diego, CA 92122-1246 Telephone: (858) 450-8400 Facsimile: (858) 587-5360 EMAIL: sseidman@hewm.com



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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT IN ACCORDANCE WITH 37 C.F.R. §§ 1.97-1.98

Commissioner for Patents U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

This Supplemental Information Disclosure Statement is filed prior to receipt of a First Office Action on the merits of the above-captioned application. Thus, a fee for filing this statement should not be due. If, however, it is determined that a fee is due, any fees that may be due in connection with filing this paper may be charged to Deposit Account No. 50-1213.

In accordance with the duty of disclosure imposed by 37 C.F.R. §1.56 to inform the Patent Office of all references known by Applicant or Applicant's representative that may be material to the examination of the subject application, Applicant's representative hereby provides this Information Disclosure Statement that is prepared in accordance with 37 C.F.R. §§1.97-1.98. Forms PTO-1449 (3 pages) and copies of the cited documents are provided herewith.

The documents listed on the Forms PTO-1449 are in the English language with the exception of item Q. Item Q (Japanese Patent No. JP63503007), which is in the Japanese language, is provided with English language Derwent abstracts

USSN 10/645,816 CANTOR, et al. Supplemental IDS

(item AE). Hence, in accordance with the requirements of 37 C.F.R. §1.98, as amended effective March 16, 1992, no further explanation of the listed items is necessary.

Although these documents are made known to the Patent and Trademark Office in compliance with Applicant's duty of disclosure, such disclosure is not to be construed as an admission by Applicant or Applicant's representative that any of the references, singly or in any combination thereof, is effective as prior art against the subject application. In accordance with 37 C.F.R. §1.97(h), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. §1.56(b) exists.

Applicant respectfully requests that the Examiner review the foregoing references and information and that they be made of record in the file history of the above-captioned application.

> Respectfully submitted, HELLER, EHRMAN, WHITE & McAULIFFE LLP

By:

Stephanie L. Seidman Registration No. 33,779

Dated: December 22, 2003

Attorney Docket No.: 25491-2408B

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San Diego, CA 92122-1246 Telephone: (858) 450-8400 Facsimile: (858) 587-5360 EMAIL: sseidman@hewm.com FORM PTO-1449

DEC 2 4 2003

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO. 25491-2408B	SERIAL NO. 10/645,816	CONFIRM NO. Unassigned
APPLICANT Cantor <i>et al</i> .	CUSTOMER N 24961	NO.
FILING DATE 08/20/03	GROUP Unassigned	

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	A	4	7	7	5	6	1	9	10/16/84	Urdea	435	6	10/04/88
	В	4	9	3	5	3	5	7	02/05/86	Szybalski	435	91	06/19/90
	С	5	0	0	2	8	6	7	03/26/91	Macevicz	435	6	10/24/88
	D	5	1	1	4	8	3	9	05/92	Blocker	435	6	05/26/89
	E	5	1	7	4	9	6	2	12/29/92	Brennan	422	78	01/24/90
	F	5	2	0	2	2	3	1	04/13/93	Drmanac et al.	435	. 6	06/18/91
	G	5	4	3	6	1	4	3	07/25/95	Hyman	435	91.2	12/23/92
	Н	5	6	2	2	8	2	4	04/22/97	Köster	435	6	02/10/95
		5	6	9	1	1	4	1	11/25/97	Köster	435	6	06/06/95
	J	5	7	9	8	2	1	0	08/25/98	Canard et al.	435	6	11/20/95
	к	6	0	2	2	6	8	8	02/08/00	Jurinke <i>et al.</i>	435	· 6	05/13/96
-	L	6	2	2	5	0	6	1	05/01/01	Becker et al.	435	6	03/10/99
	М	6	2	3	2	0	7	6	05/15/01	Schultz	435	6	02/04/00
	N	6	2	6	8	1	3	1	07/31/01	Kang et al.	435	6	12/15/97
	0	6	4	8	5	9	1	3	11/26/02	Becker et al.	435	6	10/02/00

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S	9	3	0	8	3	0	5	04/29/93	PCT		•		
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OIPE			Sheet 2 of 3
FORM PTO-1449 DEC 2 4 2003 \$2	ATTY. DOCKET NO. 25491-2408B	SERIAL NO. 10/645,816	CONFIRM NO. Unassigned
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S SUPPLEMENTAL NEORMATION	APPLICANT Cantor <i>et al</i> .	CUSTOMER N 24961	NO.
DISCLOSURE STATEMENT	FILING DATE 08/20/03	GROUP Unassigned	

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		D	осим	IENT I	NUMBI	ER		DATE	COUNTRY	CLASS	Sub Class	Trans Yes	slation No
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X English langAuage equivalent provided

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

		, , , , , , , , , , , , , , , , , , , ,
	X	Benner et al., "Identification of Denatured Double-stranded DNA by Matrix-assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry", Rapid Commu. Mass Spec., 9:537-540 (1995)
	Υ	Benner et al., "DNA Base-Pair Substitutions Detected in Double-Stranded DNA With Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry", Eur. Mass Spectrum., 1: 479-485 (1995)
	Z	Brenner, "DNA fingerprinting by sampled sequencing", <i>Proc. Natl. Acad. Sci. USA</i> 86:8902-8906 (1989).
	AA	Cantor CR, "Report on the sequencing by hybridization workshop," <i>Genomics</i> , 13:1378-1383 (1992)
	AB	Cantor et al., Sequence-directed DNA manipulation for enhanced mapping and sequencing, Human Genome Program, US Department of Energy, DOE Human Genome Program Contractor-Grantee Workshop IV, (1994)
	AC	Ch'ang <i>et al.</i> , "Detection of ΔF508 Mutation of the cystic Fibrosis Gene by Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry", <i>Rapid Comm. in Mass Spectrom.</i> , <u>9</u> :772-774, (1995)
	AD	Cosstick et al., "Synthesis and Poperties of dithymidine phosphate analogues containing 3'-thiothimidine", Nucl. Acid Res., 18(4):829-835 (1990)
,	AE	Derwent Abstract Dialog File No. 351 Acces. No. 7209274 for Japanese patent JP 63603007, published 11/02/88.
	AF	Drmanac et al., "Laboratory methods: reliable hybridization of oligonucleotides as short as six nucleotides," DNA & Cell Biology 9(7):527-534 (1990)

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APPLICANT Cantor et al.	CUSTOMER N 24961	10.
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 111111	ANT (including Author, Title, Date, Fertillett Fages, Etc.)
AG	Drmanac <i>et al.</i> , An algorithm for the DNA sequence generation from K-tuple word contents of the minimal number of random fragments, <i>J. Biomol. Struct. Dynamics</i> , 5(5):1085-1102 (1991)
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Al	Khrapko <i>et al.</i> , "An oligonucleotide hybridization approach to DNA sequencing," <i>FEBS Letters</i> 256(1-2): 118-122 (1989)
ΑĴ	Liu <i>et al.</i> , "Use of a Nitrocellulose Film Substrate in Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry for DNA Mapping and Screening", <i>Anal. Chem.</i> , 67:3482-3490, (1995)
AK	Pevzner, P., 1-turple DNA sequencing: computer anlysis, <i>J. Biomol. Struct. Dynamics</i> , 7(1):63-69 (1989)
AL	Szybalski, "Universal restriction endonucleases: designing novel cleavage specificities by combining adapter olideoxinucleotide and enzyme moieties", <i>Gene</i> , 40:169-173 (1985)
AM	Tang et al., "Matrix-assisted Laser Desorption/Ionization of Restriction Enzyme-digested DNA", Rapid Comm. Mass Spec., 8(2):183-186 (1994)
AN	Wu et al., "Time-of-Flight Mass Spectrometry of Underivatized Single-Stranded DNA Oligomers by Matrix-Assisted Laser Desorption", Anal. Chem., 66:1637-1645 (1994)

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